

Amendment Under 37 C.F.R. § 1.111
U.S. Appln. No. 10/617,040

Attorney docket No. Q76480

AMENDMENTS TO THE DRAWINGS

Figs. 12, 13, 18, 19 and 21 have been amended to include the label "RELATED ART."

Attachment: 5 Replacement Sheets

REMARKS

Formal Matters

Applicants thank the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119, and receipt of a certified copy of the priority document.

Applicants also thank the Examiner for indicating that the references cited with the Information Disclosure Statement filed July 11, 2003, have been considered. However, the Examiner has also indicated that translations have not been submitted with the foreign references disclosed with the IDS, and has both initialed and struck through the entries for JP 6-89595 and JP 10-326497 on the form PTO/SB/08.

The Examiner correctly notes that the IDS is in compliance with the provisions of 37 CFR § 1.97. As the Examiner is aware, translations are not required for references not published in English; only a concise explanation of relevance, either in the specification or separately, is required. (37 CFR § 1.98(a)(3)(i)). Applicants submit that above references are concisely explained within the specification beginning at page 3, line 6.

Applicants have attached a new form PTO/SB/08 listing the above references and respectfully request that the Examiner initial the form indicating that the references have been considered.

Objections to the Drawings

The Examiner has objected to the drawings because Figs. 12, 13, 18, 19 and 21 allegedly illustrate only that which is old. Applicants have amended the specified figures to include the label "RELATED ART."

Objections to the Specification

The Title of the invention has been objected to as allegedly not being descriptive.

Applicants have provided a more descriptive Title.

The Abstract has been objected to as allegedly not being clearly stated. Specifically, the Examiner alleges that the phrase “capable of correcting efficiently bits having a low error rate” is not clear. Applicants have supplied an amended Abstract.

Amendments to the Specification

Applicants have amended three paragraphs on pages 12, 17 and 18 for clarity and to correct typographical errors. Applicants submit that no new matter has been added.

Claim Objections

Claims 1, 6 and 9 have been objected to for various typographical errors.

With regard to the Examiner’s request for correction of the word “where” to “wherein” in claims 1 and 9, Applicants submit that neither claims 1, 9, nor any other claim contain the word “where,” therefore no correction could be made.

Concerning the Examiner’s request that the term “is” in line 3 of claim 6 be replaced with “are,” Applicants respectfully submit that the word “is” is correct in this context. The word “is” in line 3 of the claim relates to the word “plurality,” which is a singular form, not to the prepositional phrase “of exclusive OR circuits,” which would be a plural form. Therefore, the use of the term “is” is proper in this context and correction is not required.

Applicants have amended claim 9 to correct the spelling of the word “cord” in line 9 to “code” as requested by the Examiner. Since this amendment is non-limiting and is not made for patentability purposes, no estoppel is implicated.

Claim Rejections

Claims 1, 3 and 11 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Applicants traverse these rejections. However, in order to advance prosecution, these claims have been amended for clarification in a non-limiting manner, therefore, no estoppel is implicated.

Claims 1-16 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 4,688,219 to Takemae (“Takemae”), further in view of U.S. 5,307,356 to Fifield (“Fifield”). Applicants have amended claims 1, 2, 9 and 10, and canceled claims 8 and 16.

With regard to independent claim 1, the combination of Takemae and Fifield does not disclose or suggest at least wherein said error correcting code circuit comprises a plurality of divided error correcting code circuits provided independently of each other for each data mask block controlled by a data mask signal as an external signal, as recited in the claim.

Takemae is primarily directed to a memory device having redundant memory and parity checking capabilities, and merely discloses that the invention includes an error correcting circuit operatively connected to the memory cell array for receiving read data from a plurality of memory cells including a selected memory cell (column 2, lines 12-22). Takemae does not, however, disclose or suggest that the error correcting code circuit comprises a plurality of divided error correcting code circuits provided independently of each other for each data mask

block controlled by a data mask signal, as recited in claim 1. Fifield does not cure the deficiencies of Takemae.

Fifield, as cited by the Examiner, discloses the use of a Hamming error correction code, but does not disclose or suggest that an error correcting code circuit comprises a plurality of divided error correcting code circuits provided independently of each other for each data mask block controlled by a data mask signal.

Further, the combination of Takemae and Fifield does not disclose or suggest data mask blocks controlled by a data mask signals, as in the claim. A data mask signal is an external signal for controlling the writing of data to a memory cell and the outputting of data from a memory cell. One data mask signal controls 8 bits of data. For 16-bit data, two independent data mask signals are required. Since the data mask signals independently control the 8-bit data, a plurality of error correcting code circuits, one for each 8 bits of data, is required. While Applicants' invention claims error correcting code circuits provided independently of each other for each data mask block controlled by a data mask signal, the combination of Takemae and Fifield fails to disclose or suggest independent data mask blocks controlled by independent data mask signals.

Since the combination of Takemae and Fifield fails to disclose or suggest the invention as claimed in independent claim 1, claim 1 is patentable over the combined references. Independent claim 9 contains features similar to the features contained in claim 1 and is therefore patentable for similar reasons. Claims 2-7 and 10-15, which depend from one of independent claim 1 and independent claim 9, are patentable at least by virtue of their dependencies.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

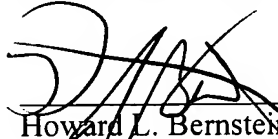
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Date: May 19, 2006